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# Fostering an Environment Conducive to Successful Program/Project Risk Management



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# Project Control and Risk Management



*Well-executed Risk Management touches all aspects of project control*



# Risk Management Challenges

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# **Elements of a Successful Risk Management Program**

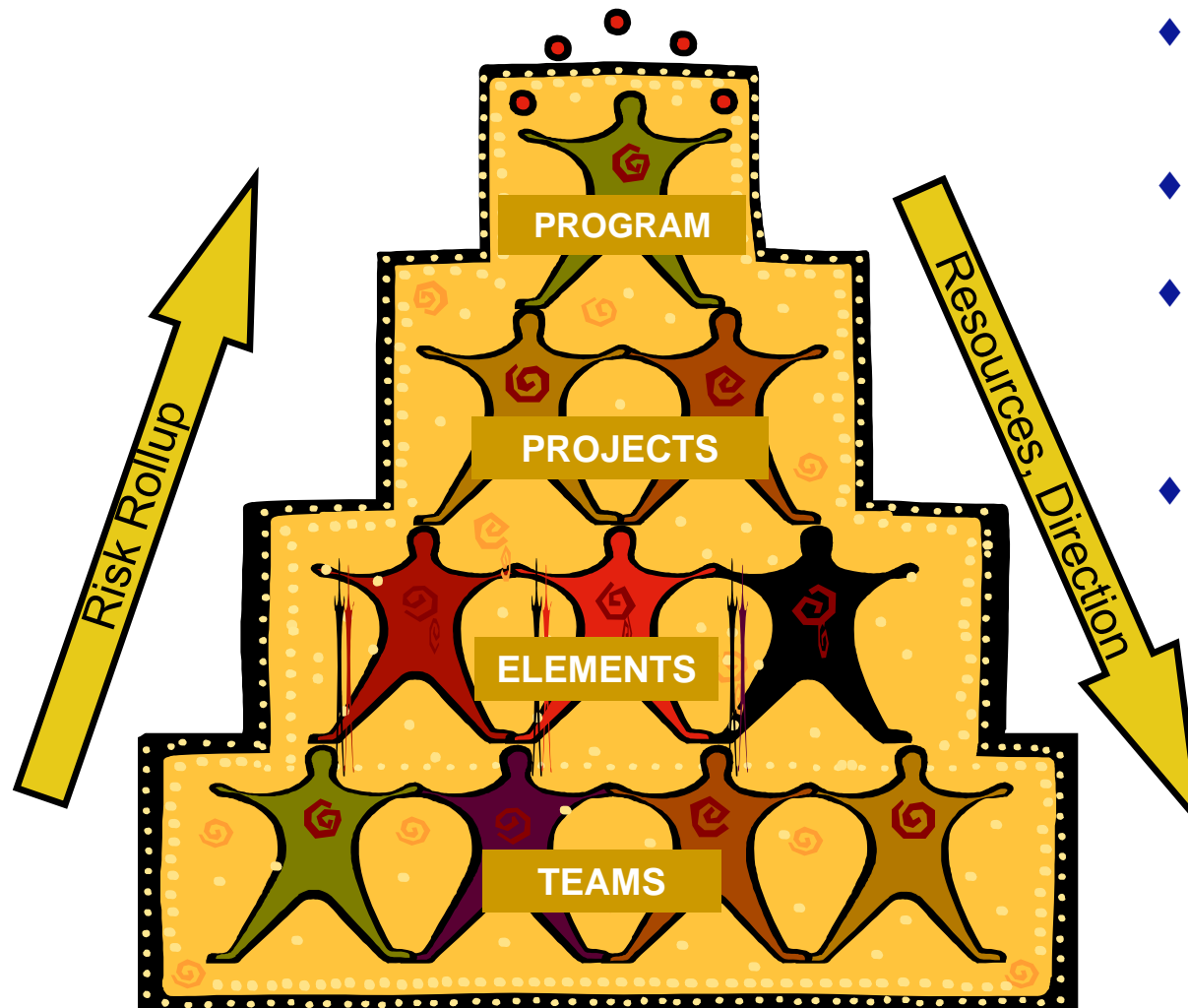
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- 1. Active and Engaged Program Management**
- 2. Communication**
- 3. Training**
- 4. Clear Processes**
- 5. Understandable Tool**



# Elements of a Successful Risk Management Program

## Engaged Program/Project Leadership



- ◆ Leadership actively seeks risk inputs in decision making
- ◆ Each layer “rolls up” to the next
- ◆ Information passes up, decisions/resources to mitigate pass down, as needed
- ◆ Ownership remains at the action level



# Elements of a Successful Risk Management Program Engaged Program/Project Leadership

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Wayne Hale, Jr:

“Our collective job is to understand the risk, mitigate it as much as possible, communicate accurately all round about the risk remaining, and then decide if we can go on with that risk.”

**Bill Gerstenmaier: “Effective risk management is behavior/attitude based and a priority for all workforce and leadership levels.”**



## **Elements of a Successful Risk Management Program Engaged Program/Project Leadership**

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- ◆ **Visible support by management sends a message to all parties that Risk Management is taken seriously.**
  - People who have managerial support seem to keep their management better informed as to what is going on in the project/group/team
  - Work gets done, issues get addressed, answers are found, etc., when people have the support of their management in doing their jobs



## **Elements of a Successful Risk Management Program Engaged Program/Project Leadership**

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- ◆ **With management's backing, team members feel more confident in doing their job.**
  - Upper management who back their team members provides the feeling that the value of the group increases as a consequence of its work
  - Those who have management support feel more loyalty and want to do good work for their management
  - Managers who support their employees seem to have better attendance at meetings, more deadlines met
  - When team members have the support of their managers, they are more apt to set goals and objectives for doing better and better work





## Elements of a Successful Risk Management Program Engaged Program/Project Leadership

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- ◆ **Management willing to step in and help resolve conflicts with teams and team members encourages communication.**
  - Confusion at the team member level is avoided
  - Solutions come about more quickly
  - Team members' hesitation to do work because of possible re-work is stopped

The lack of involvement by JPL Project Management and Systems Engineering at the lower levels did not directly cause the failure, but made it difficult or impossible for them to identify the process failures that led to it.

- Genesis Mishap Investigation Board Report, p 31



## Elements of a Successful Risk Management Program Engaged Program/Project Leadership

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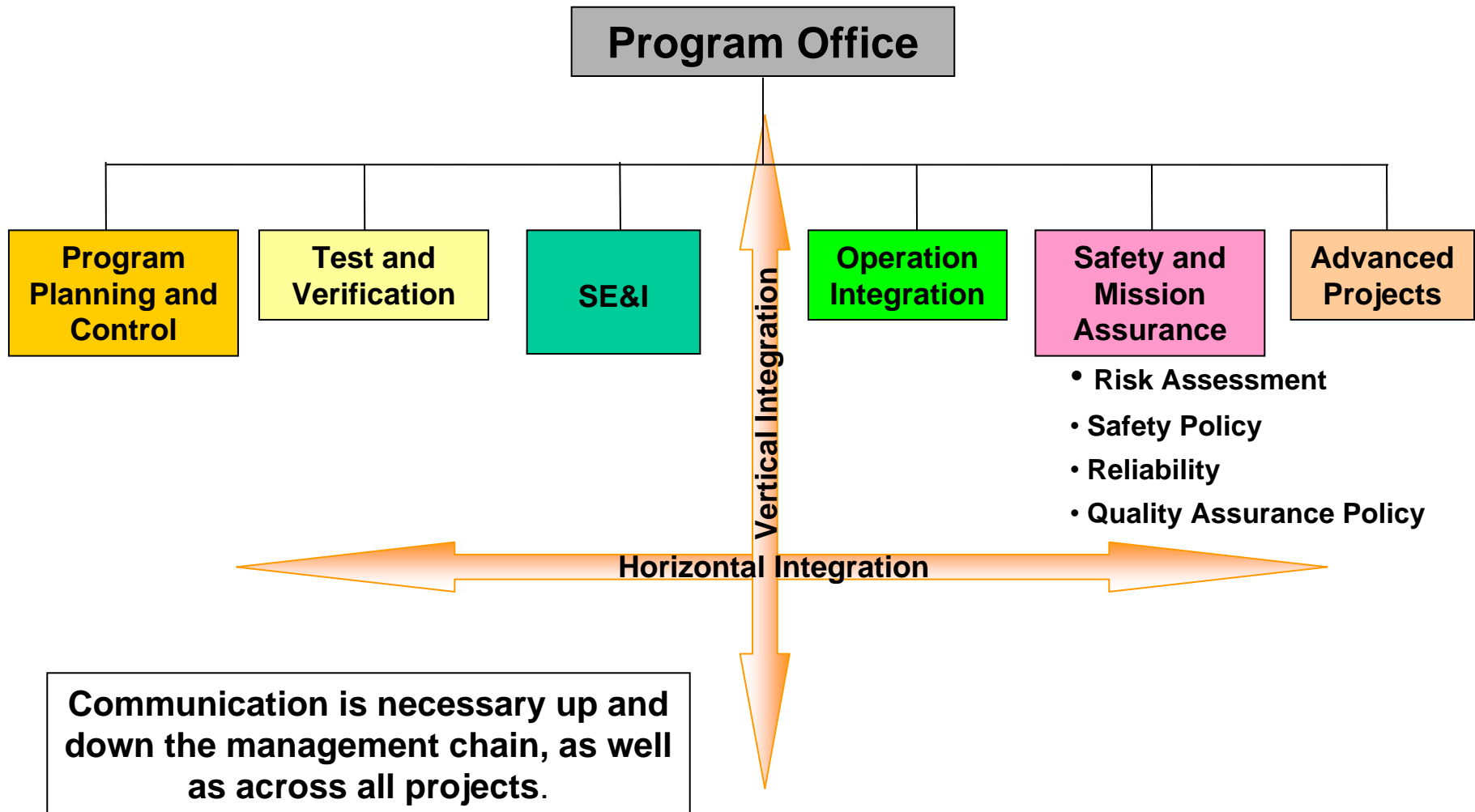
- ◆ **Fear can be a big factor when people do not do their jobs.**
  - Fear prevents an accurate risk picture from being portrayed
  - People who have management support are not afraid to do their jobs

Common methods of bringing minority opinions to the fore include hazard reports, suggestion programs, and empowering employees to call “time out” ...  
*For these methods to be effective, they must mitigate the fear of retribution,*  
and management and technical staff must pay attention.

- CAIB Vol.1, pg. 192



# Elements of a Successful Risk Management Program Communication





## Elements of a Successful Risk Management Program Communication

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◆ **Any kind of communication is good; communication can be formal or informal.**

- Formal working groups, panels or reviews
- When team members are close together and have the opportunities to just walk down the hall to discuss issues, the issues tend to be resolved easier and more quickly

◆ **Dissemination of useful information aids in success.**

IMPROVED COMMUNICATIONS ...

Project managers, because of a tendency to management isolation, failed to provide full and timely information bearing on the safety of flight 51-L to other vital elements of Shuttle program management.

- The Rogers Commission Report, Recommendation V



## Elements of a Successful Risk Management Program Communication

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- ◆ **The better that roles and responsibilities are defined, the more efficiently people work.**
  - No time is wasted on trying to figure out who does what
  - Work time is optimized when people know exactly who they need to go to for help with questions, issues, concerns
  - Being familiar with other team's responsibilities helps
    - Shared risk areas are identified
    - Multiple teams working an issue can come up with more solutions, or better solutions, than working individually



# Elements of a Successful Risk Management Program Communication

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- ◆ **Communication across all projects in a program, as well as within all teams and orgs in those projects, helps keep everyone “on the same page”.**
  - Frequent interaction helps the overall communication between people and groups,
  - Team-building activities can foster more effective workplace communication

***Momentum:*** The *Apollo 13* mission took place 35 years ago. What are the enduring lessons of that rescue, particularly to those who work in the aerospace industry?

***Kranz:*** The principal lessons center around leadership, trust, values, and teamwork. At the time of the accident, we had a very seasoned Mission Control team, which had very strong relationships with the crews, the contractors, and program management. That enabled us to make the split-second decisions necessary to achieve the rescue of the *Apollo 13* crew. Trust is the essential ingredient for leadership and success, and ours was founded on experience, personal contact, and the integrity of the people in the program.





# Elements of a Successful Risk Management Program Communication

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## ◆ Communication vertically across the management structure

- Upward communication allows successive layers of management to understand issues
- Downward communication allows teams to understand challenges which may drive solutions or mitigation plans

## ◆ Stability within teams

- Establishes existing relationships
- Maintains history of issue or problem

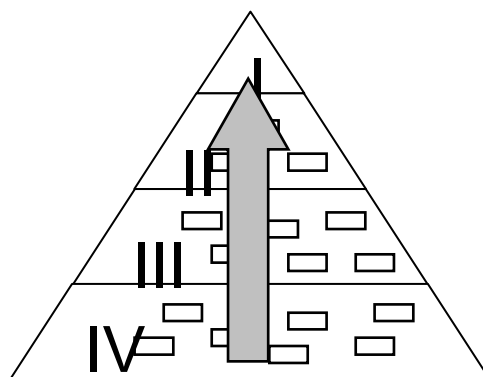


# Elements of a Successful Risk Management Program Training

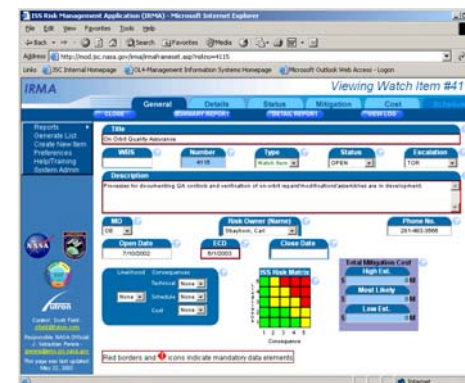
CRM



Risk Reporting



Risk Management Tool Overview







# Elements of a Successful Risk Management Program Training

## ◆ Training creates a more effective risk management system

- The more training people receive, the more comfortable they become in performing risk management
- Improves capability for risk identification
- People working on the same projects get to know one another, which helps communication
- When people are well-trained, it makes a transition easier if someone else comes in to take over for them
- Training assists in helping people make more risk-based informed decisions





# Elements of a Successful Risk Management Program Training

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## ◆ Designing a Training Program

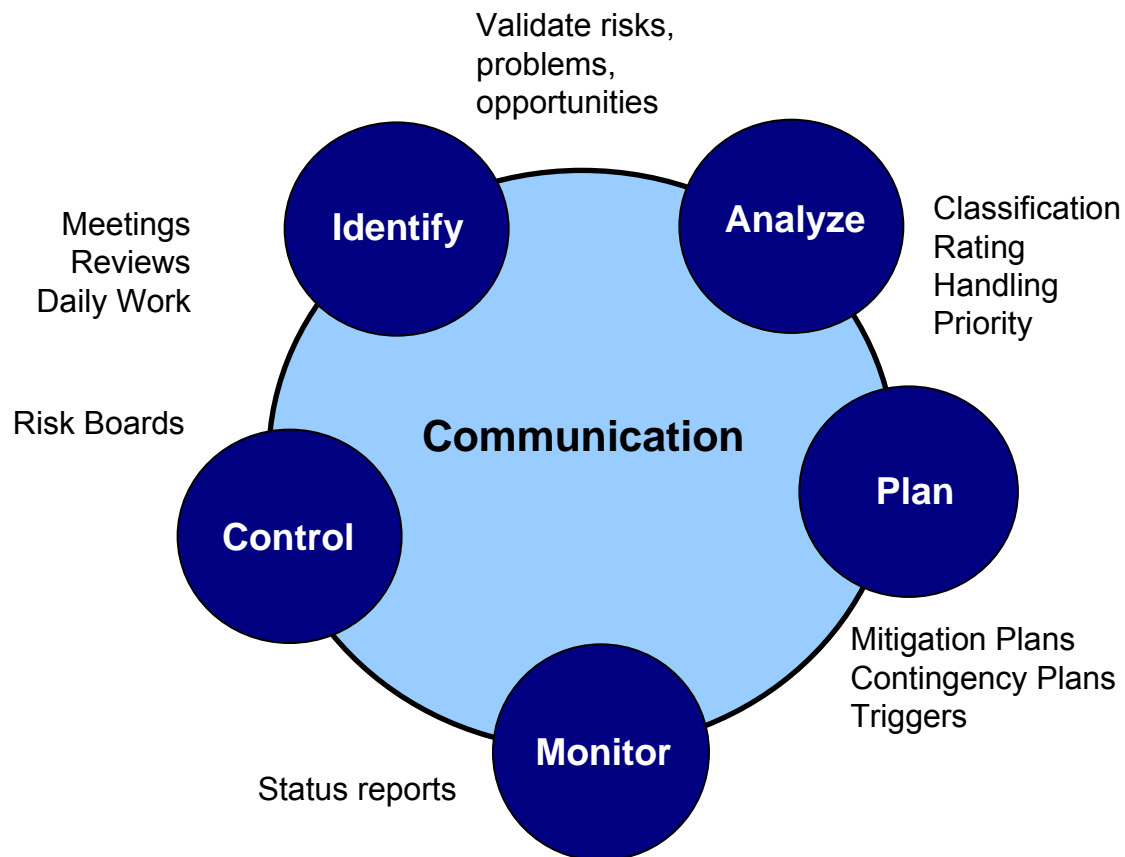
- Establish clear goals of the training program
- Train into your weaknesses by using RM metrics to identify shortfalls
- Establish who needs to be trained
- Smaller, shorter training sessions with more detail are more effective than one big training overview
- Developing people who can train each other makes improves training availability



# Elements of a Successful Risk Management Program

## Clear Processes

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## Slide 19

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m10

Do we have some kind of flowchart (mb risk lifecycle) which is a better reflection of "Clear Processes"

mmcanga, 1/20/2009



## Elements of a Successful Risk Management Program

### Clear Processes

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#### ◆ Clear processes lead to more accurate work and less confusion

- A clear definition of the roles and responsibilities of each team member will help avoid confusion, duplication of effort, tasks falling through the cracks, etc.
- When processes are not only simple and clear, but also structured and organized, people are more willing to follow them
- Simple and well-understood processes provide more efficiency in work
- Convoluted and unorganized processes confuses and frustrates people resulting in poor work performance



## **Elements of a Successful Risk Management Program**

### **Clear Processes**

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- ◆ **Clearly defined processes encourage team members to actively participate in risk management.**
  - Simple processes are more likely to be utilized by the occasional user
  - Understanding “why” helps teams determine when a process needs to be used
  
- ◆ **Document processes.**
  - Enables process stability even with unstable workforce
  - Enables training development



# Elements of a Successful Risk Management Program

## Appropriate Tool

ARM  
Active Risk Manager

File Edit New View Link Analysis Reports Tools Help

Activities

- Example Organization - template
  - CORP SYSTEMS
    - Corp Systems Operations
  - Communications Systems Business
  - Aerospace Systems Business
    - Defense
    - Commercial
    - Flight Systems
  - Projects
  - Marine Systems Business
  - Project Services Group
  - Transportation Group
  - MS Project WBS Import
  - Excel Risk Import
  - VEC Group
  - Impact Cost Forecast
  - Security Plan
    - Risk Info From BB
    - Frequency Test

SIRMA

Team Home Page: ☐ Show All Ranks

SSP Space Shuttle Program

Filter Current List

Type: All Status: All

Level: All Escl: All

ADVANCED SEARCH

TEXT SEARCH

My Team Home

Reports

Create New Item

Preferences

Help/Training

System Admin

PCASS

Other Programs

Exit SIRMA

DE-SELECT ALL	Tier 1 Rank	Team	Type	Number	Owner
<input checked="" type="checkbox"/>		Orbiter Orbiter Project Office	Risk (Medium)	2341	Snyder, M
<input checked="" type="checkbox"/>	2	Orbiter_D_A_T Orbiter Debris Assessment Team	Risk (High)	2430	Kerr, J
<input checked="" type="checkbox"/>		VEHSYS Vehicle Systems Analysis	Risk (High)	2474	Woodworth,
<input checked="" type="checkbox"/>	8	THERM Thermal Protection	Risk (Medium)	2553	Stoner, T
<input checked="" type="checkbox"/>		ET ET CCB	Risk (Medium)	2654	Overton, J
<input checked="" type="checkbox"/>		SSMIO Space Shuttle Management Integration Office	Risk (High)	2665	Reed, R
<input checked="" type="checkbox"/>		RCC-R RCC Repair	Risk (Medium)	2682	Mayeaux,
<input checked="" type="checkbox"/>	1	SEI SEI (SICB, SASCB)	Risk (High)	2689	Peters, J
<input checked="" type="checkbox"/>	3	SEI SEI (SICB, SASCB)	Risk (Medium)	2691	Peters, J
<input checked="" type="checkbox"/>	9	SEI SEI (SICB, SASCB)	Risk (High)	2692	Drewry, D
<input checked="" type="checkbox"/>		Shuttle_Proc Shuttle Processing	Risk (Medium)	2750	Willcoxson
<input checked="" type="checkbox"/>		ET ET CCB	Risk (Low)	2774	Overton, J
<input checked="" type="checkbox"/>		P_SEI Propulsion Sys. Eng. and Int.	Risk (Medium)	2791	Overbey, C

CEV_TV	3789	rsorge	Cleanliness Level for IET Facility
CEV_VIO	3083	jcurry	VIO FY14-FY20 Sustaining Engineering Resources
CEV_VIO	3520	carmstrong	Lack of Orion System Engineering Support
CEV_VIO	3523	ahart	Operations work deferred/eliminated due to FY09/10 Budget Cuts



## **Elements of a Successful Risk Management Program Appropriate Tool**

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- ◆ **The tool will only be used if its contents are accurate and current.**
  - Queries and reports provide useful management information only if the data is considered trustworthy
  - Having configuration management of risk data is important
  - Database administrators must continuously validate tool and data
  
- ◆ **Tools should be easy to use, easy to understand and have personnel available to conduct training.**
  - Having an user friendly tool allows users to easily maintain the data
  - All team members should be trained in the use of the tool





## Elements of a Successful Risk Management Program

### Appropriate Tool

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- ◆ **Tools should be easy to use, easy to understand and have personnel available to conduct training.**
  - Having an understandable tool encourages team members to actively use the tool
  - All team members should be trained in the use of the tool.
  - Even when training is available for a tool that is hard to use, people will still shy away from it
  - Hard to use tools have less use, possibly resulting in fewer risks being put into the system or “specialist” use



## Summary

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- ◆ **Risk Management is one of the program control functions that contributes to mission success.**
- ◆ **Effective Risk Management is dependant on fostering an environment that encourages open and honest discussions of programmatic challenges.**
- ◆ **Review of prior successes and failures is useful in determining what works.**